

GAL'PERINA, R.Ye.

Some neurodynamic changes under the influence of small doses
of alcohol in chronic alcoholism. Probl.sud.psikh. no.12:131-
138 '62. (MIRA 16:4)

(ALCOHOLISM)

(ELECTROENCEPHALOGRAPHY)

BANSHCHIKOV, V.M., prof.; YUMASHEVA, Yu.S., kand. med. nauk; GAL'PERINA, R.Ye.

Treating schizophrenia with stelazine. Trudy 1-go MMI 25:53-58 '63.
(MIRA 17:12)

1. Kafedra psichiatrii, 1-y Moskovskiy ordena Lenina meditsinskiy
institut imeni I.M.Sechenova (zav. kafedroy prof. V.M.Banshchikov).

GAL'PERINA, R.Ye.

Use of neuroleptic drugs in treating hypertension with mental disorders.
Trudy 1-go MMI 25:229-239 '63. (MIRA 17:12)

1. Kafedra psichiatrii 1-go Moskovskogo ordena Lenina meditsinskogo
instituta imeni I.M.Sechenova (zav. kafedroy prof. V.N.Banshchikov).

MASLIYEV, A.T., dotsent; YUMASHEVA, Yu.S., kand. med. nauk; GAL'PERINA, R.Ye.;
DROBITZHEV, Yu.Z.

Treatment of depressive states with niamid (nialamide). Trudy 1-go MMJ
25:279-286 '63. (MIRA 17:12)

1. Kafedra psichiatrii 1-go Moskovskogo ordena Lenina meditsinskogo
instituta imeni I.M.Sechenova (zav. kafedroy prof. V.M.Banshchikov).

GAL'PYRINA, R.Ye.

Use of mebedrol in encephalitis with mental disorders. Trudy 1-go MI
25:365-373 '63. (MIRA 17:12)

1. Kafedra psichiatrii 1-go Moskovskogo ordena Lenina meditsinskogo
instituta imeni I.M.Sechenova (zav. kafedroy prof. V.M.Banshchikov).

GALIPERINA, R.Ye.; YUMASHEVA, Yu.S.

Treatment with nosinan in combination with stelazine, aminazine
and tofranil (mepipramine) as one of the variations of the com-
pound therapy in psychoses. Trudy 1-go MMI 34:416-424 '64.
(MJRA 18:11)

1. Kafedra psichiatril (zav. - zasluzhennyy deyatel' nauki
prof. V.M. Banshchikov) 1-go Moskovskogo ordena Lenina medi-
tsinskogo instituta imeni Sechenova.

GAL'PERINA, T.S.

The diagnostic value of the two-dose glucose tolerance test. T. S. Gal'perina and L. Ya. Olechnik (Moscow Med. Stomatol. Akad. im. I. M. Sechenova, U.S.S.R.) 31, No. 3, 30-7 (1953).—Several modifications were investigated. With the 30-20 g. dose, a 1-hr. interval was tried on 3 normal and 44 nondiabetic pathol. cases. The hypoglycemic effect at the end of the tests was inconclusive. The 60-50 g. dose, 1-hr. interval, was equally inconsistent. Attempts to lengthen or shorten the interval to 1 $\frac{1}{2}$ -2 $\frac{1}{2}$ hrs. did not yield better results. The largest percentage of hypoglycemic effects was obtained with the 1 $\frac{1}{2}$ -1-hr. interval. The multiple dose was tried next; 6 patients received 20 g. 9 times at 30-min. intervals, 10 patients 20 g. 4 times at 30-min. intervals and 100 g. after 3 hrs. The multiple dose yielded the largest no. of hypoglycemic effects. Apparently factors other than the insulin-exerting function of the pancreas influence the glycemic curve resulting from glucose satn.

A. Mirkin

GAL'PERINA, T.S., kand.med.nauk (Moskva)

"Wandering" murmur in complete atrioventricular block in a patient with a mitral defect. Klin.med. 37 no.8:137-141 Ag '59.

(MIRA 12:11)

(MITRAL STENOSIS, complications)
(HEART BLOCK, physiology)

GAL'PERINA, V.I.

Relation between epidermophytosis and ear disease. Voen.-med.
zhur. no.7:77 J1 '59. (MIRA 12:11)
(RINGWORM) (EAR--DISEASES)

NOVGORODSKAYA, T.I.; GAL'PERINA, R.Ye.; BAKYCHAROV, Ya.P.

Late results of resuscitation following clinical death. West.khir.
84 no.1118-120 Ja '60. (MIRA 13:10)
(RESUSCITATION)

YERMAN, L.Ya.; GAL'PERINA, Ye.L.

New data on the crystalline structure of $\text{Bi}_2\text{O}_3 \cdot 2\text{MoO}_3$.

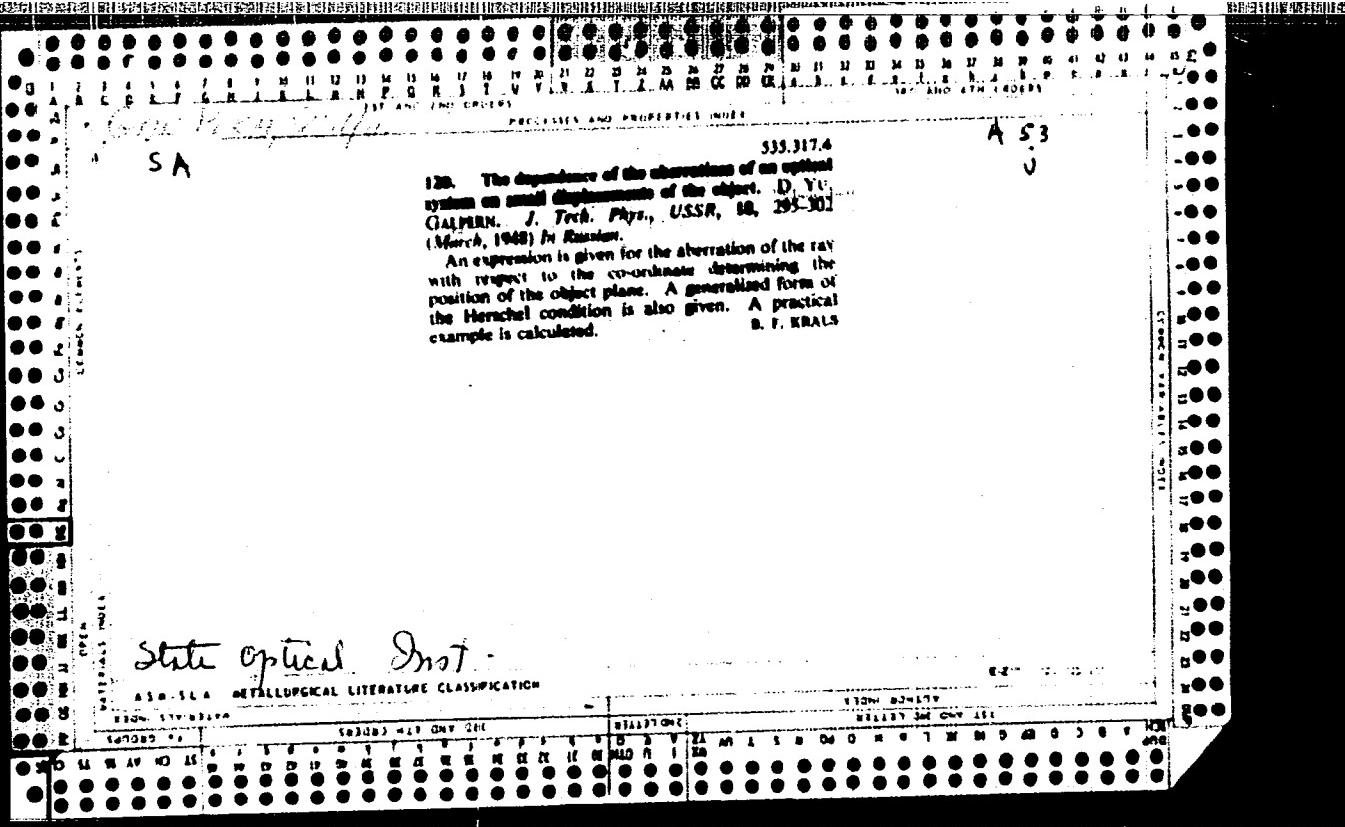
Zhur.neorg.khim. 11 no.1:221 Ja '66. (MIR 19:1)

1. Submitted May 20, 1965.

GAL'FERING, A.S., MITROFANOV, N.S.

Experienc in mechanizing the unloading and piling of beets at
the sugar factories of Kirghizistan. Sakh.prom. 34 no.7:42-46
J1 '60. (MIRA 13:7)

1. Kirgizskiy sovmarkhos.
(Kirghizistan--Sugar beets) (Loading and unloading)



Gal'pern, D.Yu.

K-2

Category : USSR/Optics - Geometric Media

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4840

Author : Gal'pern, D.Yu.
Title : Geometrical Optics in Anisotropic Media with a Single Symmetry Axis.
(Single-Axis Crystals)

Orig Pub : Zh. tekhn. fiziki, 1954, 24, No 7, 1298-1321

Abstract : No abstract

Card : 1/1

GAL'PERN, D. Yu.

USSR MS

✓ Gal'pern, D. Yu. Geometrical optics in anisotropic media
with a single axis of symmetry. (Uniaxial crystals.) 2. 1 - P/⁷
Tehn. Fiz. 24, 1298-1321 (1954). (Russian)
A method based on Fermat's principle is described for
finding the path of a ray through an optical system con-
taining uniaxial crystals. The properties of the derivatives
of the angular, mixed, and Schwarzschild eiconsals are in-
vestigated at some length. These basic results are applied
to the study of the behavior of infinitely narrow meridional
and sagittal pencils in systems with a meridional plane. For
this problem the connection is shown between focal dis-
tances, sagittal as well as meridional, in the object and image
spaces, and formulas are derived analogous to Newton's
formulas for linear and angular magnification. The basic
formulas are also used to derive the laws of reflection and
refraction at the boundary between two uniaxial crystals.
The results obtained are greatly simplified if the incident
ray, the normal at the point of incidence, and the axis of
the first crystal are coplanar. If the axis of the second crystal
is also coplanar with these, the study of the astigmatism of
infinitely narrow pencils becomes possible without any
excessive complexity in the formulas. Applications of the
general method are given to the case of prisms and to the

(OVER)

D. Yu. GAL'PERN

determination of the paths of paraxial rays through a system
of surfaces having an axis of symmetry, when the axes of
the crystals are parallel to each other and perpendicular to
the axis of the system. J. E. Rosenthal (Passaic, N. J.).

Galpern, D. Yu.

51-5-9/11

AUTHOR: Galpern, D. Yu.

TITLE: On the Application of Higher Order Aberration Theory to
the Calculation of Optical Systems (O prilozhenii teorii
aberratsiy vysshikh poryadkov k raschetu opticheskikh
sistem)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol.III, Nr 5,
pp.514-528 (USSR)

ABSTRACT: On the basis of higher order aberration theory a number
of general propositions which are important in the calcu-
lation of optical systems is established. The question of
the number of lenses and nonspherical surfaces in an
optical system necessary (but not sufficient) for the
correction of all aberrations of order $2t + 1$ or less,
is elucidated. The role of coefficients of aberration of
order $2t - 1$ or less in the appearance of aberrations of
order $2t + 1$ is considered, particularly the role of third
order aberrations in the appearance of fifth order aberrat-
ions. The paper is highly mathematical.

SUBMITTED: March 23, 1957.

AVAILABLE: Library of Congress.

Card 1/1

3(4)

AUTHOR:

Gal'pern, D. Yu.

SCOV/154-59-1-9/19

TITLE:

Telescopes in Modern Geodetical Instruments (Zritel'nyye
truby sovremennoykh geodezicheskikh priborov)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"-
yemka, 1959, Nr 1, pp 91-94 (USSR)

ABSTRACT:

The object lenses of telescopes in modern geodetical instruments are telephoto lenses. This ensures very important technical properties of the instruments but leads simultaneously to great difficulties in the computation and manufacture of telescopes. Great difficulties arise in the correction of chromatic aberrations. Chromatic aberrations of rays spreading in the paraxial range, and then the spherochromatic aberration are investigated here. The theoretical investigations and the experience of practical computations show that for the correction of the spherochromatic aberration some surfaces of the system must inevitably have a strong curvature. These offer difficulties in the manufacture. - Due to such deliberations, the computation of a telescope with the same characteristics as for the telescopes of the instruments TB and KB was carried out in 1955.

Card 1/2

Telescopes in Modern Geodetical Instruments

SOV/154-59-1-9/19

The computed values of the spherochromatic aberration of the new telescope amount to half the aberration of the telescope of the two instruments TB and KB. - In spite of this, no telescope has been made according to this computation up to date. It is also pointed out that the quality of the pictures is not only determined by the computation but also by a careful assembly and manufacture of the individual structural groups. ~ H. Koehler (Ref 1) pointed out that the chromatic aberration for rays with the wave length = $434 \text{ m}\mu$ attains high values in many telescopes. He succeeded in reducing this value down to $10' - 15'$. ~ Telescopes with a correction of the aberration for the wave length of $434 \text{ m}\mu$ will be computed in 1958. This system will then be compared with the telescope computed in 1955, and the question of an economical correction of the aberration for telescopes of geodetical instruments will be solved. There are 1 figure, 1 table, and 1 reference.

ASSOCIATION:

Gosudarstvennyy opticheskiy institut im. S. I. Vavilova
(State Optical Institute imeni S. I. Vavilov)

Card 2/2

24(4)

SOV/51-6-5-33/34

AUTHOR: Gal'pern, D.Yu., Reviewer

TITLE: F.I. Fedorov. Optics of Anisotropic Media. Academy of Sciences
of the Byelorussian S.S.R., Minsk, 1958. (F.I. Fedorov. Optika
anizotropnykh sred. Izdaniye AN BSSR, Minsk, 1958)

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 5, pp 714-715 (USSR)

ABSTRACT: The above monograph by Fedorov starts with Maxwell's and constitutive equations and uses them to discuss propagation of plane waves in an infinite medium as well as reflection and refraction of plane waves at plane boundaries of two infinite media. The monograph deals consecutively with propagation of light in an isotropic non-conducting and non-magnetic medium, in anisotropic non-conducting and non-magnetic medium, an an isotropic conducting and non-magnetic medium and finally in an anisotropic conducting and non-magnetic medium. The special feature of the monograph is that Fedorov discusses the subject using vectors and tensors which are not bound up with any particular system of coordinates. After minor criticisms the reviewer recommends the book to all those who want to study electro-magnetic optics seriously, and the first chapter is recommended to beginners in physical optics.

Card 1/1

GAL'PERN, D. Yu., Doc Tech Sci -- (diss) "Research in geometrical optics." [Leningrad], 1960. 23 pp; (State Order of Lenin Optical Inst im S. I. Vavilov); 150 copies; price not given; (KL, 17-60, 149)

33020 R
S/051/60/009/004/034/054
E032/E414

AUTHOR: Gal'pern, D.Yu.

TITLE: On apodization

PERIODIC Optika i spektroskopiya, 1960, Vol.9, No.4, pp.549-550

TEXT: The present note deals with apodization, i.e. with methods of decreasing the diameter of the central diffraction spot (Airy's disc) in the image of a luminous point. This can be done with the aid of an amplitude-phase filter in the form of suitably shaped glass plate with appropriate transmissions at various points along the plate. It is known (Ref.1: G.G.Slyusarev, GITL, M., tr.667-671, 1937) that in the paraxial position, the intensity distribution $E(\rho)$ in the image of a luminous point is given by

$$E(\rho) = \sqrt{C^2(\rho) + S^2(\rho)}. \quad (1)$$

where $S(\rho) = \int_0^{kp.} A_1(\sigma) \sin \left[\frac{2\pi}{\lambda} I(\sigma) \right] J_0 \left(\frac{2\pi}{\lambda} \sigma \rho \right) \sigma d\sigma, \quad (2)$

$$C(\rho) = \int_0^{kp.} A_1(\sigma) \cos \left[\frac{2\pi}{\lambda} I(\sigma) \right] J_0 \left(\frac{2\pi}{\lambda} \sigma \rho \right) \sigma d\sigma. \quad (2a)$$

Card 1/2

On apodization

33020 R
S/051/60/009/004/034/034
E032/E414

It is shown in the present paper that when $b(\sigma) < \frac{1}{4}\lambda$ and $A(\sigma) > 0$ i.e. when it is assumed that the wave aberration is less than a quarter of the wavelength, a filter of the above type cannot reduce the size of the central diffraction disc by a factor greater than 1.6. There is 1 Soviet reference.

SUBMITTED: August 15, 1960

Card 2/2

4f. 3500

S/051/62/013/001/012/019
EO52/E114

AUTHOR: Gal'pern, D.Yu.

TITLE: ~~On the breakdown of one-to-one correspondence between image and object~~

PERIODICAL: Optika i spektroskopiya, v.15, no.1, 1962, 124-128

TEXT: It is shown that different series of different (self-luminous and non-selfluminous) objects will, under certain conditions, produce rigorously identical images. It follows that in general it is not possible to use a known image to reconstruct the distribution of luminance or the amplitude distribution in the object plane. Strictly speaking, this does not contradict the results of B.S. Tsybakov and V.P. Yakovlev (Izv. vysshikh uch. zav., Radiofizika, v.1, no.5-6, 1958) and H. Wolter (Opt. Acta, 7, 1960, 55) since these workers assumed the object to be finite. The present analysis is based on a re-examination of the theorems of V.S. Ignatovskiy (Izv. AN SSSR, Otd. mat. i yestestv. nauk, series VII, no.6, 1955, 729) who considered infinite objects. These theorems thus turn out to apply to coherent objects also, and the fact that they hold rigorously for infinite objects only

Card 1/2

On the breakdown of one-to-one ...

S/051/62/015/001/012/019
E052/E114

does not impose a stringent limitation because, for example, the field of view of a microscope is of the order of 1000-1500 optical units. The general conclusion is that periodic components in the expansion of the function describing the luminance or amplitude distribution in the image plane give rise to a uniform background when the period is less than π units in the case of non-coherent objects, and less than 2π units in the case of coherent objects.

SUBMITTED: June 8, 1961

Card 2/2

GAL'PERN, D.Yu.

Reply to J.E.Wilkins' comments. Opt. i spektr. 7 no.4:536-537
Ap '62. (MIRA 15:5)
(Optics, Physical) (Wilkins, J.E.)

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8

GAL'PERN, D.Yu.

Disturbance of single-valued correspondence between image and
object. Opt.i spektr. 13 no.1:124-128 J1 '62. (MIRA 15:7)
(Optics)

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8"

L 11162-66 ENT(1)/T LIP(c) GW

ACC NR: AP6000361

SOURCE CODE: UR/0286/65/000/021/0056/0057

AUTHORS: Gal'pern, D. Yu.; Pronina, O. V.

ORG: none

TITLE: Objective for geodetic telescopes. Class 42, No. 176092

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 56-57

TOPIC TAGS: optic lens, telescope lens, geodetic instrument

ABSTRACT: This Author Certificate presents an objective for geodetic telescopes with internal focusing. The device consists of a positive four-lens component and a simple negative focusing lens (see Fig. 1). To correct spherochromatic aberration, the positive component is in the form of two individual lenses separated by a distance of 0.1—0.2 of the focal length of the positive component and a double cemented meniscus lens with a linear magnification of 0.4—0.8.

Card 1/2

UDC: 681.41:535.824.212:528.5

L 11162-66

ACC NR: AP6000361

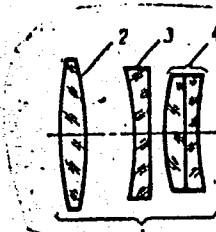


Fig. 1. 1 - Positive component; 2 and
3 - individual lenses;
4 - double cemented meniscus lens.

Orig. art. has: 1 diagram.

SUB CODE: 17/ SUBM DATE: 07Mar64

GC
Card 2/2

L 7012-66

ACC NR: AP5026798

SOURCE CODE: UR/0286/65/000/017/0078/0078

AUTHOR: Poltyreva, Ye. S.; Gal'pern, D. Yu.

TITLE: An apochromatic Petzval lens. Class 42, No. 174395 [announced by Organization of the Ministry of the Defense Industry (Organizatsiya ministerstva oboronnoy promyshlennosti)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 78

TOPIC TAGS: photographic lens, Petzval lens

ABSTRACT: This Author's Certificate introduces an apochromatic Petzval lens made up of two positive elements, each of which is combined with a negative element placed behind the positive element and separated from it by an air gap. Correction for spherochromatic aberration is provided by two meniscus elements, one negative and the other positive, with the concave surface facing the image. This compound correction system has a positive power and is located behind the first four lenses.

UDC: 535.824.28

Card 1/2

0901 1955

L 7012-66

ACC NR: AP5026798

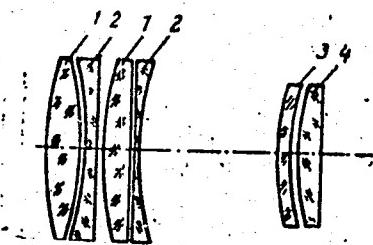


Fig. 1. 1--positive lenses; 2--negative lenses; 3--negative meniscus; 4--positive meniscus

SUB CODE: OP/

SUBM DATE: 11May64/

ORIG REF: 000/

OTH REF: 000

nw
Card 2/2

6 07392-57 EWT(1) IJP(c)
ACC NR: AR023367

SOURCE CODE: UR/0237/66/000/007/0022/0026

AUTHOR: Gal'pern, D. Yu.

45
B

ORG: none

TITLE: Estimate of frequency-contrast characteristic with the aid of the Rayleigh criterion

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 7, 1966, 22-26

TOPIC TAGS: optic system, image contrast, light aberration, photographic lens, light diffraction

ABSTRACT: The author presents a method of estimating the frequency-contrast characteristic of an optical system from the transverse geometrical aberrations, for periods which are approximately ten times larger than the limiting period. The estimate is based on a principle similar to the Rayleigh criterion whereby a wave aberration by one quarter of a wavelength is admissible. The existence of a similar criterion for the frequency-contrast characteristic is first proved by the standard vector-addition technique and its applicability region is then estimated and illustrated with numerical examples. The results lead to an estimate, based on the calculation of the ray path and the construction of aberration plots, of a frequency-contrast characteristic for frequencies which are 10 - 20 times smaller than the limiting values. The method presented in the article makes it possible to establish the permissible transverse aberrations for photographic and projection lenses whose actual resolution limit is

Card 1/2

UDC: 535.8: 535.317.1

L 07392-67

ACC NR: A16023367

many times larger than the diffraction limit. Orig. art. has: 6 figures, 22 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 22Dec65/ ORIG REF: 004

Card 2/2 *gl*

ACC NR: AP7009117

(A)

SOURCE CODE: UR/0413/67/000/003/0107/0107

INVENTOR: Gal'pern, D. Yu.; Nefedov, B. L.; Sharkunov, I. V.

ORG: None

TITLE: A nonocular optical system for observation and sighting. Class 42, No. 191162

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1967, 107

TOPIC TAGS: optic instrument, telescopic equipment, optic detection

ABSTRACT: This Author's Certificate introduces a nonocular optical system for observation and sighting. The installation contains an objective lens, a compound erecting lens and a collector in direct proximity to the image surface. Correction for the curvature of the image surface is provided by using a negative and a positive component in the erecting lens. The negative component is used for matching the entrance pupil of the erecting lens to the exit pupil of the objective lens and has a power 20% greater in absolute value than the combined power of the other components.

Card 1/2

UDC: 535.821.1

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8

ACC NR: AP7009117



1--negative component of the erecting lens; 2--positive component of the erecting lens; 3--objective lens

SUB CODE: 17/ SUBM DATE: 020ct65

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8"

LEVENSON, Viktor Emmanuilovich; GAL'PERN, G.D., doktor khim. nauk,
otv. red.; KOTLYAREVSKAYA, P.S., red.; DOROKHINA, I.N.,
tekhn. red.

[Geochemistry of bitumen and its problems] Geokhimicheskaiia
bituminologija i ee problemy. Moskva, Izd-vo Akad. nauk
SSSR. Vol.3. 1963. 198 p. (MIRA 16:4)
(Bitumen--Geology)

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8

GAL'FURN, S.D.

"Determination of Acceleration of the Center of Gravity of an Automobile in a General Case of Motion along a Horizontal Plane." Iz. Ak. Nauk SSR, Otdel. Tekh. Nauk, No. 6, 1944

BR 52059019

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8"

SAINTYRN, G.D.

Institute of Machine Studies, Acad. of Sci., USSR (-1944-)

"Concerning the Optimum Content of Eutectic in Foundry Alloys." Iz. Ak. Nauk. SSSR,
Otdel. Tekh. Nauk, No. 6, 1944

BR 52059019

GAI'FERN G. D.

PA 78T51

USSR/Medicine - Fungi
Medicine - Environment

Apr 1948

"Geotropism in the Fruit Bodies of Higher Fungi," G. D.
Gal'pern, L.P.

"Priroda" No 4

Reports observations made on fungi growing on birch stumps. Geotropism in Polyporaceae is effected by altering direction of growth, while in Agaricaceae it is due to bending of stem tissue. Illustrates process with photographs and diagrams.

78T51

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8

GAL'PERIN, G.D., doktor khim.nauk

From the editor. Itogi nauki: Khim.nauki no.2:5-9 '58.

(Petroleum products)

(MIRA 12:4)

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8"

GAL'YEN, G.M.; MAKAREVICH, I.A.

Determination of phenyl benzoate by spectrophotometry.
Zav.lab. 31 no.4:414-415 '65. (U.S. 18:13)

1. Opytno-konstruktorskoye byuro sinteticheskikh produktov.

GAL'PERN, I.L.

Effect of the semen of a different breed on the quality of offspring
in chickens [with summary in English]. Zhur. ob. biol. 19 no.3:217-
225 My-Je '58. (MIRA 11:6)

1. Pushkinskaya nauchno-issledovatel'skaya laboratoriya razvedeniya
sel'skokhozyaystvennykh zhivotnykh.
(POULTRY BREEDING)

FOMIN, A.I., kand.sel'skokhoz.nauk; GAL'PERN, I.L., starshiy nauchnyy
sotrudnik

Increasing the viability and productivity in general-pur-
pose hens by crisscrossing them with roosters of the same
and a different breed. Ptitsevodstvo 9 no.9:32-35
S '59. (MIRA 12:12)

1. Pushkinskaya nauchno-issledovatel'skaya laboratoriya
razvedeniya sel'skokhozyaystvennykh zhivotnykh.
(Poultry breeding)

GAL'PERN, I. L. Cand Agr Sci -- "Effect of foreign-breed semen upon the quality of ~~the~~ progeny and peculiarities of the sexual process in hens." Pushkin-Len, 1961 (Min of Agr RSFSR. Len Agr Inst). (KL, 4-61, 204)

279
-■-

Med Parazitol i Parazitar Bol.

257T48

USSR/Medicine - Malaria

May/Jun 53

"Elimination of Tropical Malaria in Zaporozhskaya Oblast," Ya. M. Be"yy, I. Yu. Gal'pern, Zaporozh-skaya Oblast Antimalaria Sta

Med Parazitol i Parazitar Bol, No 3, pp 221-223

As a result of the German occupation, the incidence of tropical malaria in Zaporozhskaya Oblast increased considerably. By the application of rigid measures in postwar years, tropical malaria was entirely eliminated in 1952. The number of cases was as follows: in 1946, 226; in 1947, 335; in 1948, 558; in 1949, 297; in 1950, 25; in 1951, 3; in 1952, none.

257T48

LEVINA, R.Ya.; KONTIN, V.N.; GAL'PERN,¹ M.D.; TRESHNOVA, Ya.M.

Synthesis of hydrocarbons. Part 81: Cyclopropanes with quaternary carbon atoms in the ring and in a side chain. Zhur. ob. khim. 35 no.5:785-788 May '65.

(MERA 18:6)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

GAL'PERN, M. I.

USSR/Miscellaneous-Production

Card 1/1

Authors : Gal'pern, M. I., Cand. of Techn. Sciences
Title : Machines for production of block rubble
Periodical : Mekh. Trud. Rabot., 2, 44 - 46, March 1954
Abstract : Construction industry has recently adopted several new types of stone cutters for the manufacture of block rubble. Some of these machines already underwent industrial tests and were found satisfactory. This report offers data on such machines and results obtained through their exploitation. Photo of such a stone cutting machine is included.
Tables, Graphs.
Institution :
Submitted :

GAL'PERN, M. L.

Subject : USSR/Electricity AID P - 1216
Card 1/1 . Pub. 27 - 11/34
Authors : Gal'pern, M. L., Eng., Udovichenko, B. A., Kand. of Tech.
Sci., and Voyevodin, K. N., Eng., Tashkent
Title : Application of flat metallic supporting structures
Periodical : Elektrichestvo, 12, 57-61, D 1954
Abstract : The authors consider as advisable the use of such structures for 35-kv transmission lines. They develop a method of determining additional forces in unbroken conductors at symmetrical and asymmetrical breaks. They examine the performance of the transmission line when a wind is directed along the line. 11 photographs, drawings and diagrams. Four Russian references (1, 1928; 3, 1947-1952).
Institution : None
Submitted : Jl 17, 1954

GAL'PERN, M. L.

Subject : USSR/Electricity AID P - 1221
Card 1/1 Pub. 27 - 16/34
Authors : Gal'pern, M. L., Petrosov, V. D. and Pekson, G. M., Engs.
Title : Basic problems of design of regional substations with three voltages (Article by Ye. A. Bugrinov, Elektrichestvo, No. 3, 1954) (Discussion)
Periodical : Elektrichestvo, 12, 73, D 1954
Abstract : The authors consider that the sectionalizing of separate bus-bar systems by one disconnector, as proposed by Ye. A. Bugrinov, does not always make it possible to make repairs without disconnecting the whole substation. They offer a different solution and discuss the problem. One diagram.
Institution : Uzbekenergo
Submitted : No date

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8

GAL'PERIN, M.L., inzh.

Calculating the pull capacity of articulated towers for transmission
lines. Elek. sta. 29 no. 4:39-42 Ap '58. (MIRA 11:8)
(Electric lines--Poles)

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8"

BATISHCHEV, K.N., inzh.; BULANKIN, A.I., inzh.; GAL'PERN, M.L., inzh.

Concerning the use of VVN-220 air cutouts. Elek. sta. 33 no.6:
53-56 Je '62. (MIRA 15:7)
(Electric cutouts)

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8

GAL'PERN, M.L., inzh.

Wood as support material for overhead power transmission lines.
Energ. stroi. no.41:63-68 '64. (MIRA 17:11)

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R000614130008-8"

GALIBERK, M. A. Engineer

"High Production Attachments," Stanki i Instrument, 10, No. 12, 1939.

Report U-1505, 4 Oct 1951.

GAL'PERN, N.K.

GAL'PERN, N.K., kand.tekhn.nauk, dots.

Calculating electromagnets with an external rotating armature.
Elektrichestvo no.12:77-78 D '57. (MIRA 10:12)

1.Leningradskiy politekhnicheskiy institut im. Kalinina.
(Electromagnets)

Числ.

- 6) корреляции постановке задачи Коши для совместных систем дифференциальных уравнений в частных производных первого порядка. ДАН, 17(1934), 227-230.
6) корреляции постановке задачи Коши для совместных систем линейных уравнений в частных производных. Учен. спб., 7(42), (1940), 111-142.
3) Задачи на численные методы решения уравнений в частных производных. Т. 1, учен. зап. ин-та, 45 (1940), 93-96.
Об асимптотика решений уравнений $y' = f(x,y)$. ДАН, 24(1947), 347-350.

SO: Mathematics in the USSR, 1917-1947

edited by Kurosh, A.G.,

Larkushevich, A.I.,

Rashevskiy, P.I.

Moscow-Leningrad, 1947.

- 3) - On the numerical solution of boundary problems for systems of differential equations
Krein equations in partial derivatives
3) - On the numerical solution of boundary problems for systems of differential
equations in partial derivatives of the first order
3) - On the numerical solution of boundary problems for systems of differential
equations in partial derivatives of the first order

GALPERN, S.

Halpern, S. Sur les asymptotes des solutions de l'équation
 $y' = f(x, y)$. C. R. (Doklady) Acad. Sci. URSS (N.S.)
54, 383-386 (1946).

The author demonstrates the following theorem. Suppose that in the semi-strip $x \geq \alpha$, $\beta - m \leq y \leq \beta + m$ the following conditions are satisfied: (1) $f(x, y)$ is continuous; (2) the equation $f(x, y) = 0$ determines a continuous curve $y = b(x)$ which for $x \geq \alpha$ lies in the strip and has the line $y = \beta$ as an asymptote; (3) there exists a function $\omega(y)$, continuous and monotonic in the interval $\beta - m < y < \beta$ and $\beta < y < \beta + m$ such that curves representing $x = \omega(y)$ lie in the semi-strip and such that $\omega(\beta - 0) = \omega(\beta + 0) = +\infty$; moreover, for each fixed value of y , $\inf_{x \geq \alpha} |f(x, y)| \geq K(y) \geq 0$, where $1/K(y)$ is an integrable function in any segment not containing the point β . If $f(x, y)$ is negative above $y = b(x)$ and positive below then each solution of $y' = f(x, y)$ having one point in the semi-strip has $y = \beta$ as asymptote. The author also considers the situation when $f(x, y)$ has opposite signs from those indicated. N. Levinson (Cambridge, Mass.).

Source: Mathematical Reviews.

Vol. 8 No. 10.

PETROVSKIY, I.G.; VOVCHENKO, G.D.; SALISHCHEV, K.A.; SERGEYEV, E.M.;
MOSKVITIN, V.V.; SRETENSKIY, L.V.; GEL'FOND, A.D.; GOLUBEV, V.V.;
ALEKSANDROV, P.S.; SOBOLEV, S.L.; BAKHVALOV, S.B.; OGUBALOV, P.M.;
KREYNES, M.A.; MYASNIKOV, P.V.; ZHIDKOV, M.P.; GAL'PERN, S.A.;
ZHEGALKINA-SLUDSKAYA, M.A.

Vsevolod Aleksandrovich Kudriavtsev; obituary. Vest.Mosk.un. 8
no.12:129 D '53. (MLRA 7:2)
(Kudriavtsev, Vsevolod Aleksandrovich, 1885-1953)

Gal'pern S.

Gal'pern, S. A. Cauchy's problem for an equation of Sobolev's type. Dokl. Akad. Nauk SSSR (N.S.) 104 (1955), 815-818. (Russian)

This paper considers explicit representations for solutions of

$$(\partial/\partial t)^2 \Delta u = -(\partial/\partial x_n)^2 u + f(t, x_1, x_2, \dots, x_n)$$

with initial conditions

$$u=\phi \text{ when } t=0, \quad (\partial u/\partial t)=\psi \text{ when } t=0.$$

Here Δu denotes the n -dimensional Laplacian of u ,

$$\Delta u = [(\partial/\partial x_1)^2 + (\partial/\partial x_2)^2 + \dots + (\partial/\partial x_n)^2] u.$$

It is proved that solutions of this initial-value problem are unique, and that every sufficiently smooth solution can be represented in the form

$$u(t, x_1, \dots, x_n) =$$

$$\int \Delta^s \phi(\xi_1, \dots, \xi_n) H^{(s)}(t, x_1 - \xi_1, \dots, x_n - \xi_n) d\xi_1 \dots d\xi_n,$$

provided one first reduces to an equivalent problem where $\psi=0$. Here s is an integer which must be chosen in a suitable way, and an explicit expression is given for $H^{(s)}$, obtained by inverting the order of integration in a Fourier transform. Both the uniqueness and the repre-

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GAL'PERN, S.A.

sentrability follow from Green's formula, provided one has a suitable fundamental solution. Such a fundamental solution is obtained by means of the Fourier integral. This generalizes a result of Sobolev [Izv. Akad. Nauk SSSR. Ser. Mat. 18 (1954), 3-50; MR 16, 1029] who dealt with the case $n=3$.

R. B. Davis (Durham, N.H.)

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2/2

R. B. DAVIS
DURHAM, N.H.

Gal'pern, S.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress (Cont.) Moscow,
Jun-Jul '56, Trudy '56, v. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
Gabib-Zade, A. Sh. (Baku). Investigation of the Ramification
Points of Non-linear Loaded Integral Equations With Various
Parameters. 44-45

Gavrilov, N. I. (Odessa). New Method Based on the Theory of
Moments, for Investigating Non-linear Differential Equations. 45-46

Gagua, M. B. (Tbilisi). On the Completeness of Systems of
Harmonic Functions 46

Mention is made of Keldysh, M. V.

Gal'pern, S. A. (Moscow). Cauchy Problem for the Equations of
S. L. Sobolev Type 47-48

There is mention of Petrovskiy, I. G.

There are 4 references, all of them USSR.

Gakhov, F. D. (Rostov-na-Donu). Chibrikova, L. I. (Kazan')
Card 15/80

R
PETROVSKIY, I.G., akademik; GAL'PERN, S.A., dots., otv.red.

[Equations of mathematical physics; program for the Mechanics-Mathematics Faculty. Majors: Mechanics, astronomy] Programma po uravneniam matematicheskoi fiziki dlja mekhaniko-matematicheskogo fakul'teta. Septsial'nosti - mekhanika, astronomiya. 1956. 1 p.
(MIRA 11:3)

1. Moscow. Universitet.
(Mathematical physics--Study and teaching)

GAL'PERN, S.A.; GUSAROVA, R.S.; FILIPPOV, A.F.

"Integration of ordinary differential equations" by I.M. Matveev.
Reviewed by S.A.Gal'pern, R.S.Gusarova, A.F.Filippov. Usp.mat.
nauk 12 no.3:279-283 My-Je '57. (MIRA 10:19)
(Differential equations, Linear)

GAL'PERN, S.A. (Moskva); LOPSHITS, A.M. (Moskva); BALK, M.B. (Smolensk);
ZHAROV, V.A. (Yaroslavl'); BYAKIN, V.I. (L'vov); ARNOL'D, V.I.
(Moskva); MANIN, I.Yu. (Moskva); DYNKIN, Ye.B. (Moskva); PROIZ-
VOLOV, V. (Moskva); ALEKSANDROV, A.D. (Leningrad); VITUSHKIN, A.G.
(Moskva).

Problems of elementary mathematics. Mat. pros. no.3:267-270 '58.
(Mathematics--Problems, exercises, etc.) (MIRA 11:9)

AUTHOR: Gal'pern, S.A. (Moscow)

20-119-4-4/59

TITLE: Cauchy's Problem for General Systems of Linear Partial Differential Equations (Zadacha Koshi dlya obshchikh sistem lineynikh uravneniy s chastnymi proizvodnymi)
SSSR,PERIODICAL: Doklady Akademii Nauk¹⁹⁵⁸, Vol 119, Nr 4, pp 640-643(USSR)

ABSTRACT: Let the system

$$(1) \frac{\partial}{\partial t} \left[M(t, \frac{1}{i} \frac{\partial}{\partial x_k}) \right] u = L(t, \frac{1}{i} \frac{\partial}{\partial x_k}) u$$

be given, where x_k denotes the arguments x_1, \dots, x_n , M and L are quadratic polynomial matrices with respect to the operations $\frac{1}{i} \frac{\partial}{\partial x_k}$ and possess coefficients depending on t , and u is the sought vector function with N components. Let the initial conditions be

$$(2) u(t_0, x_k) = \Phi(x_k).$$

Let the coefficients of (1) be continuous functions of t ,

Card 1/3

Cauchy's Problem for General Systems of Linear Partial Differential Equations 20-119-4-4/59

$t_0 \leq t \leq T$. After the Fourier transformation

$$v_i = \frac{1}{(2\pi)^n} \left\{ u_i e^{-i(\alpha, x)} dx_1 \dots dx_n \right\}, \quad (\alpha, x) = \sum_{k=1}^n \alpha_k x_k$$

one obtains

$$(3) \quad \frac{d}{dt} \left[M(t, \alpha_k) \bar{v} \right] = L(t, \alpha_k) \bar{v}$$

The functions $\bar{v}^1 = (v_1^1, v_2^1, \dots, v_N^1)$ are assumed to form the fundamental system of solutions of (3), whereby it is

$$\|v_i^1\|_{t=t_0} = E.$$

Theorem: If $\|v_i^1\|$ is bounded for all α and $t_0 \leq t \leq T$ and for $\alpha \rightarrow \infty$ does not increase quicker than α^p , $p > 0$, then the formulas

Card 2/3

PRIVALOV, Ivan Ivanovich [deceased]; GAL'PERN, Samariy Aleksandrovich;
UGAROVA, N.A., red.; MURASHOVA, N.Ya., tekhn.red.

[Fundamentals of analysis of infinitely small numbers; manual
for self-education] Osnovy analiza beskonechno malykh;
posobie dlia samoobrazovaniia. Izd.3., perer. Moskva, Gos.
izd-vo fiziko-matem.lit-ry, 1959. 251 p. (MIRA 12:7)
(Calculus)

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S/550/60/009/000/005/008
D251/D305

AUTHOR: Gal'pern, S.A.

TITLE: Cauchy's problem for a general system of linear equations with partial derivations

SOURCE: Moskovskoye matematicheskoye obshchestvo. Trudy, v. 9, 1960, 401 - 423

TEXT: The results of this article were reported to the Moscow Mathematical Association on May 20, 1958. The author states the basic case of Cauchy's problem for a system of partial differential equations in the variables $(t, x_1, x_2, \dots, x_n)$. Cauchy's initial conditions are

$$u(t_0, x_k) = \varphi(x_k). \quad (2)$$

In the case of homogeneous equations the basic system may be written in matrix form

$$\frac{\partial}{\partial t} [M(t, \frac{1}{i} \frac{\partial}{\partial x_k}) u] = L(t, \frac{1}{i} \frac{\partial}{\partial x_k}) u \quad (1')$$

Card 1/7

Cauchy's problem for a general ...

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where $L_1(t, \frac{1}{i} \frac{\partial}{\partial x_k}) = L_1(t, \frac{1}{i} \frac{\partial}{\partial x_k}) - \frac{\partial}{\partial t} M(t, \frac{1}{i} \frac{\partial}{\partial x_k})$. The coefficients of (1') are assumed to be continuous complex functions of the real variable t where $0 \leq t \leq T$. Applying a Fourier transformation and simplifying, gives

$$M(t, \alpha_k) \frac{dv}{dt} = L_1(t, \alpha_k). \quad (3')$$

After establishing some basic lemmas, the author states and proves the following existence theorems, using the methods of Bochner (Ref. Fouriesche Integrale, 1932). Theorem 1: If the terms of the fundamental matrix $\|v_i^t\|$ of the system (3') satisfies the conditions

$$|v_i^t| \leq \frac{A}{|\alpha|^q}, \quad q \geq 0 \quad (A_1)$$

for $|\alpha| < 1$ and $0 \leq t_0 < t \leq T$ and

$$|v_i^t| \leq A/\alpha^p, \quad p > 0 \quad (A_2)$$

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Cauchy's problem for a general ...

for $|\alpha| > 1$, then the formula

$$u_1 = \int \sum_{i=1}^N v_i E \varphi_i e^{i(\alpha x)} d\alpha_1 \dots d\alpha_n \quad (12)$$

gives the solution of the problem (1') - (2) if the initial functions φ_i satisfy the following conditions: a₁) all moments from up to the order $\eta = q - n + 1$ exist and equal zero up to $\eta = 1$, i.e.

$$I_{s_1, \dots, s_n} = \int (x_1)^{s_1} \dots (x_n)^{s_n} \varphi_i(x_k) dx_1 \dots dx_n = 0 \quad (13)$$

for all integral $s_k \geq 0$ such that

$$\sum_{k=1}^n s_k \leq \eta - 1, \quad |I_{s_1, \dots, s_n}| \leq A$$

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D251/D305

Cauchy's problem for a general ...

with $\sum_{k=1}^n s_k = \eta$; a_2) the function φ_i together with derivatives of order $\left[\frac{n}{2}\right] + p + k + 1$ belong to $L_{1,2}$. Here and henceforth \bullet is the order of the highest derivatives in the operators

$$M(t, \frac{1}{i} \frac{\partial}{\partial t}) \quad L(t, \frac{1}{i} \frac{\partial}{\partial t}).$$

Theorem 2: Let ℓ_1, \dots, ℓ_n be non-negative integers, k as defined above, and u the solution of (1') - (2) then the expression

$$\ell_1 x_1^{\ell_1} \ell_2 x_2^{\ell_2} \dots x_n^{\ell_n} D^{k_0} u, \text{ where } \ell_1 + \dots + \ell_n < L, \text{ and } k_0 \leq k \quad (21)$$

belongs to $L_{1,2}$ if (1) conditions (a_1) and (a_2) of Theorem 1 are satisfied [Abstractor's note: A is written for a in the text in both cases] (2) $M(t, \alpha_k) = /a/c (\alpha_0 + \dots + \alpha_g/a/g) \neq 0$ or $/a/ \neq 0$. Also Card 4/7

Cauchy's problem for a general ...

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$$\lambda = \left(\left[\frac{n}{2}\right] + L + 1\right)(r + p) + r + \cancel{L} - L. \quad (25)$$

The following uniqueness theorem is stated and proved: Theorem 3:
 If conditions 1), 2), 3) of Theorem 2 are satisfied, then the solution of the problem (1') - (2) with zero initial conditions is such that $|D^\sigma u| \leq A/x^L$ where $\sigma < k$, $L \geq 0$ and the conditions

$$M(t, \frac{1}{i} \frac{\partial}{\partial x_k})u = P(t, x_k) \quad (41)$$

$$L(t, \frac{1}{i} \frac{\partial}{\partial x_k})u = -\frac{P(t, x_k)}{\partial t} \quad (42)$$

are satisfied, where the coefficients of the vector function $P(t, x_k)$, dependent on t , are of power not higher than η where

$$\eta = \left[\left(\left[\frac{n}{2} \right] + L + 1 \right) (s + q + c) + q + c + L + \frac{3 + (1)^n}{2} \right], \quad (43)$$

and $P(0, x_k) \equiv 0$. Dependence on the initial functions - Theorem 4:
 Card 6/7

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S/020/60/132/05/069

AUTHOR: Gal'pern, S. A.

TITLE: Lacunes of Non-hyperbolic Equations

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 5,
pp. 990 - 993

TEXT: The domains of the plane $t = 0$ in which the values of the initial data have no influence on the value of the solution in the point M are denoted as lacunes. In the case of hyperbolic equations the existence of lacunes has been investigated by J. G. Petrovskiy (Ref.1), V. A. Borovikov (Ref.2) and others. The author gives a class of non-hyperbolic equations with lacunes. The simplest equation of this kind is

$$(1) \quad \frac{\partial^2 \Delta u}{\partial t^2} = \sum_{i=1}^n \frac{\partial^4 u}{\partial x_i^4}$$

A more complicated example is given by the equations

$$(3) \quad Q \left(\frac{\partial}{\partial t} + \frac{\partial}{\partial x_1} + \cdots + \frac{\partial}{\partial x_n} \right) u = 0,$$

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Lacunes of Non-hyperbolic Equations

where Q is a homogeneous polynomial with constant coefficients and must satisfy certain additional conditions. The author gives a method which permits to conclude the existence of the lacunes for (3) from wellknown criteria for the hyperbolic case.

J. M. Gel'fand and G. Ye Shilov are mentioned in the paper.

There are 4 references: 3 Soviet and 1 American.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M. V.
Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: February 25, 1960, by J. G. Petrovskiy, Academician

SUBMITTED: February 25, 1960

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Card 2/2

GAL'PERN, S. A., Doc Phys-Math Sci, "CAUCHY'S PROBLEMS
FOR GENERAL SYSTEMS OF LINEAR EQUATIONS WITH PARTIAL DERI-
VATIVES." Moscow, 1961. (Moscow ORDER OF LENIN AND OR-
DER OF LABOR RED BANNER STATE UNIV IM M. V. LOMONOSOV).
(KL, 3-61, 202).

GAL'PERN, S.A.; OLEYNIK, O.A.

Ivan Georgievich Petrovskii (on the occasion of his 60th birthday).
ε Vest.Mosk.un. Ser.l: Mat., mekh. 16 no.1:3-7 Ja-F '61. (MIRA 14:3)
(Petrovskii, Ivan Georgievich, 1901-)

S/041/62/000/009/017/069
A060/A000

AUTHOR: Gal'pern, S. A.

TITLE: Lacunae in nonhyperbolic equations

PERIODICAL: Referativnyy zhurnal, Matematika, no. 9, 1962, 51, abstract 9B2⁴⁶
(In collection: "Funktional'n. analiz i yego primeneniye". Baku,
AN AzerbSSR, 1961, 33)

TEXT: The paper investigates differential equations with constant coefficients of the form

$$Q\left(\frac{\partial}{\partial t}, \frac{\partial}{\partial x_1}, \dots, \frac{\partial}{\partial x_n}\right)u = 0,$$

where $Q(\lambda, \xi_1, \dots, \xi_n)$ is a homogeneous polynomial of degree 1 in $\lambda, \xi_1, \dots, \xi_n$ and of degree $m < 1$ in λ :

$$Q(\lambda, \xi_1, \dots, \xi_n) = P_{1-m}(\xi_1, \dots, \xi_n)\lambda^m + \dots + P_1(\xi_1, \dots, \xi_n).$$

It is assumed that $P_{1-m}(\xi_1, \dots, \xi_n)$ and $P_1(\xi_1, \dots, \xi_n)$ do not vanish for

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Lacunae in nonhyperbolic equations

$\sum \xi_i^2 = 1$, and that the equation $Q(\lambda, \xi_1, \dots, \xi_n) = 0$ has m real distinct roots in λ for $\sum \xi_i^2 = 1$. Then, if $n > m-1$ and n is odd, the neighborhood of the origin of coordinates is a lacuna. The method of constructing a lacuna is also indicated.

Author's summary

[Abstracter's note: Complete translation]

Card 2/2

GAL'PERN, S.A.

Cauchy problem for S.L. Sobolev's equation. Sib. mat. zhur. 4 no.4:
758-774 Jl-Ag '63. (MIRA 16:9)

GAL'PERN, S.A.

Cauchy problem for general systems of linear partial differential
equations (author's summary of his doctor's dissertation). Usp.
mat. nauk 18 no.2:239-249 Mr-Ap '63. (MIRA 16:8)
(Differential equations, Partial)

ACCESSION NR: AP4012958

S/0020/64/154/004/0757/0759

AUTHORS: Gal'pern, S.A.; Kondrashov, V.Ye.

TITLE: Cauchy problem for a differential operator decomposing into wave factors

SOURCE: AN SSSR. Doklady*, v.154, no.4, 1964, 757-759

TOPIC TAGS: cauchy problem, wave equation, differential operator, differential equation, partial derivative, mathematical physics, plane wave

ABSTRACT: This work is devoted to the Cauchy problem for the equation

$$\mathcal{L}u \equiv \prod_{k=1}^l \left(\frac{\partial^2}{\partial t^2} - \frac{1}{a_k^2} \Delta \right)^{r_k} u(x, t) = 0, \quad (1)$$

where

$$a_1 > a_2 > \dots > a_l > 0; \Delta = \sum_{j=1}^n \frac{\partial^2}{\partial x_j^2}; \quad x = (x_1, \dots, x_n).$$

Let $2m$ be the order of equation (1); $m = r_1 + r_2 + \dots + r_l$. The in-

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ACCESSION NR: AP4012958

Initial conditions are such that

$$\left. \frac{\partial^s u}{\partial t^s} \right|_{t=0} = f_s(x), \quad s = 0, 1, \dots, 2m - 1. \quad (2)$$

The solution to this equation can be obtained if the solution to the problem with such initial conditions is such that

$$\left. \frac{\partial^s u}{\partial t^s} \right|_{t=0} = 0, \quad s = 0, 1, \dots, 2m - 2, \quad (3)$$

$$\left. \frac{\partial^{2m-1} u}{\partial t^{2m-1}} \right|_{t=0} = f(x). \quad s = 2m - 1.$$

are known. In the case where $r_1 = r_2 = \dots = r_k = 1$, the solution can be obtained by means of the classical Herglotz-Petrovskiy formulas for a homogeneous and strictly hyperbolic equation. It is of some interest to obtain formulas for solving the problem through the spherical means of the initial functions, i.e. formulas which are analogous to the generally known formulas, yielding a solution to the Cauchy problem for a wave equation. The authors obtained such formulas for the solution of (1) with unrestricted r_k . These formulas help to determine precisely the degree of smoothness of the initial functions. They are also useful in solving the problem of the nature of the

Card 2/3

ACCESSION NR: AP4012958

relationship of a solution to the equation in the apex of the characteristic cone to the values of the initial functions in each of those domains on which the surface of the characteristic cone lays out the plane of the initial data, i.e. when some of these domains will be gaps or weak gaps. The Cauchy problem with initial conditions of the general form (2) can be reduced to a Cauchy problem (3) and solution of the problem (2) is a linear combination of solutions of the type (3) and their derivatives with respect to t. Orig. art. has: 5 equations.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University)

SUBMITTED: 31Oct63

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: MM

NR REF Sov: 003

OTHER: 001

Card 3/3

1. GAL'PERN, V.
2. USSR (600)
4. Machinery - Maintenance and Repair
7. Restoration of metal parts worn out to the limit. Za ekon. mat., No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

Gal'pern, V. V.

Investigation of the dependence of the dielectric constant
and the tangent of the dielectric loss angle of barium titanate
on the intensity of a high-frequency field. E. V. Sinyakov
and V. V. Gal'pern. Soviet Phys. JETP 1, 111-1116 (1958)
(English translation). See C.A. 50, 14291e. H.M.P.

My work
12/1

USSR / Radiophysics

1

Abs Jour : Ref 'Zhur - Fizika, No 4, 1957, No 10035

Author : Cinyakov, E.V., Galpern, V.V.
Inst : Dnepropetrovsk University, USSR
Title : Investigation of the Dependence of the Dielectric Constant
and the Tangent of the Dielectric Loss Angle of Barium Ti-
tanate on the Intensity of the High Frequency Electric
Field.

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 30, No 4, 675-680

Abstract : A method is described for the investigation of the dependence of the dielectric constant and the tangent of the dielectric loss angle of barium titanate on the electric field intensity at various temperatures with the aid of a measuring circuit, containing a linear variable capacitor, whose rotor is driven by electric motor at 1,500 rpm. During one half of the period, the capacitance varies linearly, and during the second half it diminishes. Over this cycle, upon suitable choice of parameters, the circuit is twice in resonance with the generator, and the resonance is fixed on the oscillogram in the form of two resonance curves. By connecting

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USSR / Radiophysics

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Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 10035

Abstract : the tested capacitor in parallel the peaks of the resonant curves are shifted by an amount proportional to the capacitance connected; the shift serves as a measure of this capacitance. Heating of the specimen upon application of a high field (up to 3.2 kv/cm) is prevented by the short time of application of the high frequency field (0.1 seconds). The maximum error in the measurement of capacity is estimated at 2%, and in the measurement of the tangent of the loss angle at 25%.

The tangent of the dielectric loss angle is determined by the method whereby the circuit is detuned as the voltage is measured with a vacuum tube voltmeter.

It is shown that the non linearity of $C = f(E)$, the temperature behavior of the capacitance, and the tangent of the loss angle for barium titanate at high frequency and in strong fields all have a character analogous to that observed in weak

Card : 2/3

USSR / Radiophysics

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Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 10035

Abstract : fields. At a frequency of 1 Mc the capacitance is less and the nonlinear properties are less strongly pronounced than at a frequency of 50 cycles. In addition, the tangent of the loss angle depends weakly on the field intensity. A more pronounced manifestation of the nonlinear properties of barium titanate in the region of the Curie point is attributed by the authors to the fact that the rotation of the moments under the influence of the external field is facilitated in this region.

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Card : 3/3

AUTHOR: Gal'pern, V.V. (Engineer) SOV/110-59-4-19/23

TITLE: The Determination of Inductance Defects in Loading
Coils of Communications Cables (Opredeleniye braka po
induktivnosti v katushkakh pupinizirovannykh kabeley
svyazi)

PERIODICAL: Vestnik Elektropromyshlennosti, 1959, Nr 4, p 68 (USSR)

ABSTRACT: In manufacturing communications cables with loading coils it is important that the inductance of the loading coils should be right, and in particular inductances of different coils should not differ by more than $\pm 1.5\%$. Coils of the wrong inductance are usually located by bridge methods but in some cases this is not convenient. This article proposes a new method of inspecting for inductance which is of more general application and which also can reveal which of the loading coils at the line ends is the cause of trouble. An audio-frequency generator and valve volt-meter are connected to one end of the line. The generator is tuned to resonance frequency which is recognised by the valve voltmeter readings. Since the cables capacitance is usually known, and in any case measured, the inductance can be determined from the

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SOV/110-59-4-19/23

The Determination of Inductance Defects in Loading Coils of Communications Cables

resonant frequency. If there are loading coils at each end of the line the test is made from each end in turn and then the defective coil can easily be located. The Card 2/2 method has proved effective and economical in service.

There are 1 figure and 2 Soviet references.

SUBMITTED: February 14, 1958

GAL'PERN, V.V.

Apparatus for detecting the specific charge of an electron for use in
laboratory work in general physics. Izv. vys. ucheb. zav.; fiz.
no.6:169-170 '60. (MIRA 14:3)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Electrons) (Physical instruments)

L 16126-65 EWT(m) ASD(a)-5/AFETR JD/JW/EM

ACCESSION NR: AP5000697

S/0181/64/006/012/3750/3751

B

AUTHORS: Gal'pern, V. V.; Radchenko, I. V.

TITLE: Temperature dependence of the dark electric conductivity
of stilbene

SOURCE: Fizika tverdogo tela, v. 6, no. 12, 1954, 3750-3751

TOPIC TAGS: stilbene, electric conductivity, dark current, tempera-
ture dependence, activation energy, solid phase, liquid phase

ABSTRACT: This investigation was stimulated by the lack of published data on the conductivity of bulk stilbene. In view of the brittleness of stilbene single crystals the measurements were made with polycrystals made from single crystals to ensure purity. The procedure is briefly described. An electrode system with a guard ring was used to determine the volume current. The sample was heated at a rate of 10--15 deg/hr and kept at constant temperature for about

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a half hour before each measurement. The temperature was kept constant within 0.1° . The stationary current was measured with a vacuum-tube electrometer at an external field intensity $\sim 10^3$ V/cm. The results for two samples are shown in Fig. 1 of the enclosure. The average values obtained for the conductivity and for the thermal activation energy are $(2.0 \pm 0.5) \times 10^{-2}$ ohm $^{-1}$ cm $^{-1}$ and 1.70 ± 0.05 eV, respectively. Measurements were also made of the electric conductivity of stilbene near the melting point and in the liquid state. The conductivity of the liquid is approximately 300 times higher than that of the solid. Supercooling of liquid stilbene was observed. "The authors thank N. N. Spendiarov for growing the single crystals and for many valuable hints." Orig. art. has: 1 figure.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)

SUBMITTED: 22Jul64

ENCL: 01

SUB CODE: SS, EM

NR REF SOV: 001

OTHER: 003

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ACCESSION NR: AP5000697

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ENCLOSURE: 01

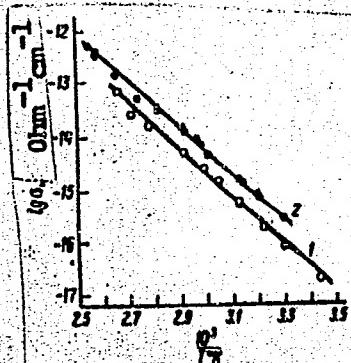


Fig. 1. Temperature dependence of specific electric volume conductivity of polycrystalline stilben with different activation energies and resistivities

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(Iron-silicon alloys)

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(Acetates--Analysis) (Water--Analysis)

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GAL'PERN, Yu.I.

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1. Institut fiziki AN SSSR.
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